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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yasumasa Fujioka

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OLIFF & BERRIDGE, PLC

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EXAMINER

RALIS, STEPHEN J

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

12/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,980	Applicant(s) FUJIOKA ET AL.	
	Examiner STEPHEN J. RALIS	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2006 and 18 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Applicant is respectfully requested to provide a location within the disclosure to support any further amendments to the claims due to when filing an amendment an applicant should show support in the original disclosure for new or amended claims. See MPEP § 714.02 and § 2163.06 ("Applicant should specifically point out the support for any amendments made to the disclosure.").

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 September 2008 has been entered.

Response to Amendment/Arguments

4. Applicant's arguments filed 29 September 2008 have been fully considered but they are not persuasive as set forth below.

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Claim Objections

5. Claims 11 and 12 are objected to because of the following informalities: Claim 11, line 2: ".38mm" should read –0.38 mm–; and Claim 12, line 2: ".25mm" should read –0.25 mm–. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case, applicant has recited "a distance "a" from an edge of the conductive film to an edge of the ceramic body on a second pair of parallel end faces of the conductive-film-containing electrode adjacent to the first pair of parallel end faces and a thickness "c" of the ceramic body satisfying a relationship " $(c/2) \leq a \leq 2c$ ". The examiner can find only a relationship of " $(c/2) \leq a \leq 5c$ " with no disclosure to " $5c$ " being equivalent to " $2c$ ". Therefore, the recitation to the limitation of the relationship of " $(c/2) \leq a \leq 2c$ " is deemed new matter.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

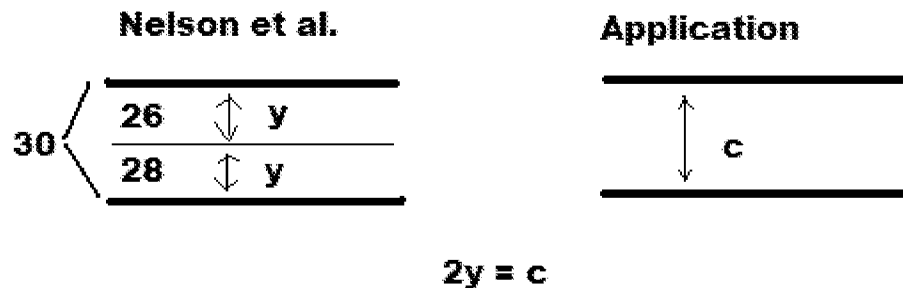
9. Claims 1-3, 5-7 and 10 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by Nelson et al. (U.S. Publication No. 2002/0131918).

Nelson et al. disclose a plasma generating electrode (a double dielectric barrier edge-connected reactor element (54; page 4, paragraph 45, Figure 9) comprising at least two opposing plate-shaped unit electrodes (electrode plates 26, 28), each having a rectangular surface and four end faces (see Figures 5, 6), and a holding member (edge connector 10), which holds a fixed end of a first pair of parallel ends end faces (edges 41) of the unit electrode (electrode plates 26, 28) in a state in which the unit electrodes (electrode plates 26, 28) are separated at a specific interval (see Figures 3, 9), and is capable of generating plasma upon application of voltage between the unit electrodes (Abstract; page 2, paragraph 15-16; whole document), at least one of the opposing unit electrodes being a conductive-film-containing electrode including a ceramic body as a dielectric and a conductive film disposed inside the ceramic body (page 4, paragraphs 45-47; see Figures 4-6, 9), and a distance "a" (distance 35; page 3-4, paragraphs 40-

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42; Figures 4-6) from an edge of the conductive film to an edge of the ceramic body on a second pair of parallel end faces (edges 37) of the conductive- film-containing electrode adjacent to the first pair of parallel end faces (edges 41) and a thickness "c" (thickness 25 – or "y" defined below; page 3-4, paragraphs 40-42; Figures 4-6). Nelson et al. further disclose the thickness, "c", (25) being in the range 0.38 millimeters to about 1 millimeter, preferably 0.5 millimeters (page 3, paragraph 40), and the distance, "a", being large relative to the width (13) of the tines (12), which is in the range of 0.5 millimeters to about 2.0 millimeters, preferably about 0.9 millimeters.

With respect to the limitation of satisfying a relationship of $(c/2) \leq a \leq 2c$, Nelson disclose an embodiment with two dielectric plates (26, 28) being on either side of the conductive electrode ink (30) (see Figure 9). Nelson further discloses the dielectric plates (26, 28) as being prepared from dielectric plate (24) having a width/thickness (25) of about 0.38 millimeters to about 1 millimeter, preferably 0.5 millimeters (page 3, paragraph 40; see Figure 4). Since Nelson et al. disclose each plate half (26, 28 of combination plate 30) having a thickness (25) of preferably 0.5 millimeters (page 3, paragraph 40) and the thickness of the dielectric plate of the instant application is "c" as disclosed in Figure 2, the below mathematical equivalency may be made:



Therefore, the thickness of the electrode plate (24,26, 28) would be the thickness of the dielectric plate, “y”, (0.38, *preferably 0.5, or 1.0 millimeters*) multiplied by two or “c = 2*y”. For mathematical simplification, the recited relationship may be simplified to recite “ $y \leq a \leq 4y$ ” with the thickness “c” actually being “2 * y” since the electrode (30) is inside two dielectric plates (26, 28). In addition, Nelson et al. disclose a distance “a” (distance 35; page 3-4, paragraphs 40-42; Figures 4-6) from an edge of the conductive film to an edge of the ceramic body on a second pair of parallel end faces (edges 37) of the conductive- film-containing electrode adjacent to the first pair of parallel end faces (edges 41) and a thickness “c” (thickness 25 – or “y” defined above; page 3-4, paragraphs 40-42; Figures 4-6). Nelson et al. further disclose the distance, “a”, (distance 35) being large relative to the width (13) of the tines (12), which is in the range of 0.5 millimeters to about 2.0 millimeters, preferably about 0.9 millimeters. ***The examiner notes that the distance being “large relative to the width 13 of tines 12....” is deemed very broad.*** Nelson et al. disclose a minimum thickness “c” (thickness 25 – or “y” defined above) as being 0.38 millimeters and a maximum as being 1.0 millimeter. Nelson et al. also disclose the width (13) as being a minimum of 0.5 millimeters and as a maximum of 2.0 millimeters. Since Nelson et al. disclose the

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distance “a” (distance 35) as being “**large relative to the width 13**”, it is deemed that twice or double a number or twice or double width (13) would be and anticipates “**large relative to**” the width (13). Therefore since Nelson et al. do contemplate the benefits of the relative distances of the recited claims and the equivalencies asserted above are made with respect to the disclosed minimum and maximum values, the disclosure of Nelson et al to (0.38 millimeters, 0.5 millimeters, or 1.0 millimeters) \leq (2*0.5 millimeters, 2*0.9 millimeters, or 2*2 millimeters) \leq 4*(0.38 millimeters, 0.5 millimeters, or 1.0 millimeters) fully meets “ $(c/2) \leq a \leq 2c$ ” given its broadest reasonable interpretation.

With respect to the limitations of claim 2, Nelson et al. disclose a distance “b” (small setback 39) as being about 5 millimeter (page 4, paragraph 4; see Figures 5, 6). As noted previously, the thickness “c” is actually “2 * y” since the electrode (30) is inside two dielectric plates (26, 28). Therefore, the relationship, “ $2c \leq b \leq 10c$ ”, with respect to Nelson et al. is “ $4y \leq b \leq 20y$ ” or 4*(preferably 0.5 millimeters to 1 millimeter) \leq (about 5 millimeters) \leq 10*(2*(preferably 0.55 millimeter to 1 millimeters) fully meets “ $2c \leq b \leq 10c$ ” given its broadest reasonable interpretation.

With respect to the limitations of claim 3, Nelson et al. disclose a distance “d” (small setback 39) as being about 5 millimeters (page 4, paragraph 4; see Figures 5, 6). Furthermore, Nelson recites a preferred thickness of “y” being preferably 0.5 millimeters to 1 millimeter and the preferred distance “d” being about 5 millimeters. Therefore, the relationship, “ $c/2 \leq d \leq 5c$ ”, with respect to Nelson et al. is “ $y \leq d \leq 10y$ ” or (0.5 millimeters preferred to 1 millimeter) \leq (about 5 millimeters) \leq 10*(0.5 millimeters

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preferred to 1 millimeter)) fully meets ““(c/2) ≤ d ≤ 5c” given its broadest reasonable interpretation.

With respect to the limitation of claim 5, Nelson et al. disclose the holding member (edge connector 10) being a made of dielectric materials not limited to but including alumina, cordierite or mullite (page 3, paragraph 34). Nelson et al. further discloses the barrier electrode plates (24, 26, 28) being dielectric barrier plates (page 3-4, paragraphs 40-42, 45-47). Therefore since Nelson et al. disclose alumina or mullite being the preferred material for use as the dielectric material, the Nelson et al. dielectric electrode plates would be inherently made of the same material since it is preferred.

With respect to the limitation of claim 6, Nelson et al. disclose the electrode being made of materials such as silver or platinum (page 5, paragraph 50).

With respect to the limitations of claim 7, Nelson et al. disclose a plasma reactor (44) that would inherently have a casing holding the reactor element (54) or the exhaust steam (74) gas would not be constricted to the reactor (44) with the gas passage (exhaust stream 74) being introduced into the reactor (44) with the inherent casing and flowing through the plasma generated by the electrode structure Abstract; page 2, paragraph 15-16; page 5, paragraph 55).

With respect to the limitations of claim 10, the dielectric material of interest being ceramics of alumina, cordierite or mullite, as noted above. These ceramic material are considered dense material and the conductive film (electrode 30) being sandwiched between the dielectric/ceramic material plates (26, 28). Therefore, Nelson et al. fully

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meets "the ceramic body is a dense ceramic and the ceramic body and the conductive film are integrated" Given its broadest reasonable interpretation.

Nelson et al. further disclose high frequency AC electrical energy being provided from a source (70).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 1-3, 5-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (U.S. Publication No. 2002/0131918).

To the degree it can be argued that Nelson et al. do not teach the limitation of satisfying a relationship of " $(c/2) \leq a \leq 2c$ "; the ceramic body including at least one ceramic selected from the group consisting of alumina, mullite, ceramic glass, zirconia, cordierite, silicon nitride, aluminum nitride, and glass;; and the thickness "c" of the

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ceramic body is less than 0.38mm, 0.25mm or less, or greater than 1 mm, Nelson is applied to itself as set forth:

Nelson et al. disclose a distance "a" (distance 35; page 3-4, paragraphs 40-42; Figures 4-6) from an edge of the conductive film to an edge of the ceramic body on a second pair of parallel end faces (edges 37) of the conductive- film-containing electrode adjacent to the first pair of parallel end faces (edges 41) and a thickness "c" (thickness 25 – or "y" defined below; page 3-4, paragraphs 40-42; Figures 4-6). Nelson et al. further disclose the thickness, "c", (25) being in the range 0.38 millimeters to about 1 millimeter, preferably 0.5 millimeters (page 3, paragraph 40), and the distance, "a", being large relative to the width (13) of the tines (12), which is in the range of 0.5 millimeters to about 2.0 millimeters, preferably about 0.9 millimeters.

Nelson et al. disclose the holding member (edge connector 10) being a made of dielectric materials not limited to but including alumina, cordierite or mullite (page 3, paragraph 34). Nelson et al. further discloses the barrier electrode plates (24, 26, 28) being dielectric barrier plates (page 3-4, paragraphs 40-42, 45-47). Nelson et al. teach that alumina, cordierite and mullite is recognized by those of ordinary skill in the art to be a ceramic material suitable for a dielectric material in a plasma generating electrode in a plasma reactor.

Therefore, to provide a distance "a" from an edge of the conductive film to an edge of the ceramic body on a second pair of parallel end faces of the conductive-film-containing electrode adjacent to the first pair of parallel end faces and a thickness "c" of the ceramic body satisfying a relationship " $(c/2) \leq a \leq 2c$ " would have been a mere

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engineering expediency as Nelson et al. clearly teaches the variation of distances and thicknesses of plasma generating electrode films and structure to provide a simplified assembly that reduces the overall cost (page 2, paragraphs 13-14). In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide a distance "a" from an edge of the conductive film to an edge of the ceramic body on a second pair of parallel end faces of the conductive-film-containing electrode adjacent to the first pair of parallel end faces and a thickness "c" of the ceramic body satisfying a relationship " $(c/2) \leq a \leq 2c$ ", since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. Similarly, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to and the thickness "c" of the ceramic body is less than 0.38mm, 0.25mm or less, or greater than 1 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. Furthermore, it would have been obvious to modify Nelson et al. with the teaching within itself to include alumina, cordierite or mullite as the dielectric material since it has been found that alumina, cordierite and mullite are art recognized equivalent dielectric material in plasma generating electrode structures within plasma reactors.

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13. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (U.S. Publication No. 2002/0131918) in view of Kellogg et al. (U.S. Publication No. 2002/0027133).

Nelson et al. disclose all of the limitations of the claimed invention, as previously set forth, except for the conductive film has a thickness of 5 to 30 μm .

However, applying a resistive conductive film/ink having a thickness of 5 to 30 μm is known in the art. Kellogg et al. specifically teach a known technique of screen printing conductive inks to a thickness of about 10 microns (page 17, paragraph 194). Kellogg et al. Kellogg et al. teach that screen printing conductive inks to a thickness of about 10 micron is recognized by those of ordinary skill in the art of providing conductive layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the conductive ink of Nelson et al. with the known technique and resulting micron thickness of Kellogg et al. to improve the device and yield predictable results.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (U.S. Publication No. 2002/0131918) in view of Hemingway et al. (U.S. Patent No. 6,423,190).

Nelson et al. disclose all of the limitations of the claimed invention, as previously set forth, except for the power source being a pulsed power supply for applying voltage to the plasma generating electrode.

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However, a pulsed power source for applying voltage to a plasma generating electrode is known in the art. Hemingway et al. teach the usage of modulating a carrier frequency to provide pulses at a given interval in order to provide optimal energy transfer to the exhaust gas (page 2, line 50 – page 3, line 8). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the AC high frequency electrical power supply with the pulsed power modulation power supply method of Hemingway in order to provide optimal energy transfer to the exhaust gas, thereby improving the efficiency of the plasma reactor.

15. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (U.S. Publication No. 2002/0131918) in view of Hemingway et al. (U.S. Patent No. 6,423,190) as applied to claim 8 above, and further in view of Okubo et al. (U.S. Publication No. 2005/0229564).

The Nelson-Hemingway combination discloses all of the limitations, as previously set forth, except for the pulsed power supply including at least one SI thyristor.

However, a plasma generation device for exhaust gas treatment utilizing a pulsed power supply including at least one SI thyristor is known in the art. Okubo et al. teach a plasma generation device utilizing a high voltage pulse power source including an SI thyristor as a switching element to provide a maximum voltage of about 45kV at a rated load and a frequency that can be changed within the range of 80 to 500 Hz. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Nelson-Hemingway combination with the pulsed power supply

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including an SI thyristor of Okubo et al. in order to provide a maximum voltage of about 45kV at a rated load and a frequency that can be changed within the range of 80 to 500 Hz. Furthermore, it would have been obvious to modify the Nelson-Hemingway combination with the pulsed power supply including an SI thyristor of Okubo et al. since it has been found that a pulsed power supply with an SI thyristor is an art recognized equivalent of a pulsed power supply in plasma generating electrode structures within plasma reactors.

Remarks

16. With respect to applicant's reply/argument that Nelson et al. does not disclose how large the distance of 35, the examiner respectfully disagrees. Nelson et al. explicitly discloses distance (35) being large relative to the width (13) of the tines (12), which is in the range of 0.5 millimeters to about 2.0 millimeters, preferably about 0.9 millimeters.

The examiner notes that the distance being "large relative to the width 13 of tines 12...." is deemed very broad. Nelson et al. disclose a minimum thickness "c"

(thickness 25 – or "y" defined above) as being 0.38 millimeters and a maximum as being 1.0 millimeter. Nelson et al. also disclose the width (13) as being a minimum of 0.5 millimeters and as a maximum of 2.0 millimeters, preferably 0.9 millimeters. Since Nelson et al. disclose the distance "a" (distance 35) as being "***large relative to the width 13***", it is deemed that ***twice or double a number*** or ***twice or double width (13)*** would anticipate or be "***large relative to***" the width (13). Therefore, the examiner

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maintains that Nelson et al. do disclose a distance (35), however, concede that it is dependent on the width (13) of tines (12).

17. In addition, with respect to applicant's reply/argument of improper extrapolation, the examiner has provided applicant with equation relationship equivalencies based on the minimum, preferred and maximum values of both the thickness "c" (thickness 25 – or "y" defined above) and the width (13), and further asserting that twice or double the width (13) anticipates "**large relative to**". There is no extrapolation involved in the asserted analysis above and the values are explicitly and anticipated by Nelson et al. Furthermore, the examiner has provided values definitively taught and suggested in the disclosure of Nelson et al. that provide "sufficient specificity" since the values used for anticipation are based on the minimum, preferred and maximum values disclosed in Nelson et al. Therefore, the examiner maintains the anticipation rejection of the relationship of $(c/2) \leq a \leq 2c$ thereof as set forth above.

18. To the degree it can be argued that Nelson et al. do not teach the limitation of satisfying a relationship of $(c/2) \leq a \leq 2c$, the additional rejection of Nelson applied to itself is set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN J. RALIS whose telephone number is (571)272-6227. The examiner can normally be reached on Monday - Friday, 8:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen J Ralis/
Primary Examiner, Art Unit 3742

Stephen J Ralis
Primary Examiner
Art Unit 3742

SJR
December 9, 2008